



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2023/2024

FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE AND BACHELOR OF SCIENCE IN PROCUREMENT AND LOGISTICS MANAGEMENT

### BEC 3102: PRINCIPLES OF MICROECONOMICS

DATE: APRIL 2024

TIME: 2 HOURS

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INSTRUCTIONS: Answer question *one* and any other *two* questions

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#### QUESTION ONE (30 MARKS)

- a) The total cost function in production of product X is  $C=1000-100Q+15Q^2+Q^3$

Where C= cost in Ksh

Q=quantity in units

Compute:

- (i) Total cost and average cost at output level of 10 units (4 marks)
- (ii) Marginal cost of producing the 12<sup>th</sup> unit (2 marks)
- b) By use of a diagram, explain the concept “Production Possibility Frontier” (6 marks)
- c) Explain situations that may give rise to abnormal demand (6 marks)
- d) Discuss the sources of monopoly power (6 marks)
- e) By use of a diagram illustrate and explain the expansion path of a firm (6 marks)

#### QUESTION TWO (20 MARKS)

- a) Discuss the characteristics of a perfectly competitive market (10 marks)

- b) By use of diagrams, distinguish between movement along a demand curve and a shift of demand curve (10 marks)

**QUESTION THREE (20 MARKS)**

- a) By use of a well labelled diagram, explain the three stages of production in the short run period as implied by the law of diminishing returns (10 marks)
- b) Outline the characteristics of indifference curves (4 marks)
- c) The average cost of producing product X is  $\frac{30}{Q} + 4 - 2Q + 4Q^2$

Determine:

- (i) Total cost function (2 marks)
- (ii) Marginal cost function (2 marks)
- (iii) Fixed cost (2 marks)

**QUESTION FOUR (20 MARKS)**

- a) Explain the factors that can cause supply curve to shift to the right (10 marks)
- b) The demand and supply functions for product Y are  $Q=10-2P$  and  $Q=-2+3P$
- (i) Identify with a reason the equation that represent demand and one that represent supply (2 marks)
- (ii) Determine the equilibrium price and equilibrium quantity for Y (4 marks)
- (iii) Sketch the equilibrium (4 marks)

**QUESTION FIVE (20 MARKS)**

- a) Explain the factors that influence demand for a product in a market (10 marks)
- b) Define the term price discrimination and state conditions necessary for its successful application (10 marks)